

Electronic Map Market in Japan: Key Research Findings 2009

~ The growth of the electronic map market will be continuously lead by the car navigation and PND sector in future ~

Research Outline

Yano Research Institute has conducted a study on the electronic map market in Japan based on the following research outline.

1. Research period: From February to August 2009
2. Research targets:
Electronic map vendors, GIS solution vendors, mobile navigation service providers, map or location-based advertising providers, mobile telecommunication carriers, etc.
3. Research methodologies:
Face-to-face interviews with relevant personnel by our specialized researchers, interviews via telephone and e-mail, and literature researches

Key Findings

- ◆ **The electronic map market stalled in 2008 though it expanded until the middle of the year mainly in the sector of car navigations and PNDs.**

The market size for the electronic maps in 2008 was 49.24 billion yen (based on shipment from vendors). The market had grown steadily, having marked 49.26 billion yen in 2006 and 51.96 in 2007, but experienced 5.2% of large negative year-on-year growth in 2008. One of the major factors that impacted the market should be the decline of shipment to the car navigation and PND (Personal Navigation Devices) sector after the middle of 2008 that had driven the electronic map market until then.

- ◆ **The total market is expected to start showing a growing trend in 2010 in spite of negative year-on-year growth in FY2008 and FY2009.**

The total market size continuously shows decreasing trend in also 2009 partially because private demand from the GIS (Geographic Information System) sector has declined since the mid 2008, and we forecast the market size in 2009 will end up with 48.75 billion yen.

In and after 2010, the market size should exhibit recovery trends due to the expected recovery of GIS market and growth of car navigation and PND sector, and is forecasted to be 50.35 billion yen in 2010 and 51.9 billion yen in 2011.

- ◆ **The car navigation and PND sector will continue to drive the market growth in future.**

We foresee the car navigation and PND sector will continuously lead the electronic map market in future. In this sector, higher definition of maps than it is now will be required in future as interaction between car navigation systems, mainly genuine car navigation systems, and automobiles progresses, and therefore, the price of map database will be escalating. We predict that the electronic map market further expand as the price goes up.

Report format:

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➤ Research Summary

1. Trends and perspectives of the electronic map market

The market size for the electronic map in 2008 was 49.24 billion yen (based on shipment from vendors). The market had grown steadily, having marked 49.26 billion yen in 2006 and 51.96 in 2007, but experienced 5.2% of negative year-on-year growth in 2008. One of the major factors that impacted the market should be the decline of shipment to the car navigation and PND (Personal Navigation Devices) sector after the middle of 2008 that had driven the electronic map market until then.

The total market size continuously shows decreasing trend in also 2009 partially because private demand from the GIS (Geographic Information System) sector has declined since the mid 2008, and we forecast the market size in 2009 will end up with 48.75 billion yen. In and after 2010, the market size should exhibit recovery trends due to the expected recovery of GIS market and growth of car navigation and PND sector, and is forecasted to be 50.35 billion yen in 2010 and 51.9 billion yen in 2011 respectively.

We foresee the car navigation and PND sector will continuously lead the electronic map market in future. In this sector, interaction between car navigation systems, mainly genuine car navigation systems, and control systems of automobiles is expected to progress. For instance, a car navigation system may alarm if the car does not slow down when it draw near the stop line. Also, the steering may be assisted by the controlling system by compiling a database of information on curves of roads. In order to make these usages happen, it is necessary to gather and update map information with higher definition than existing ones almost in real-time, and this will make price of the map database more expensive, and the market size for the electronic maps will further expand accordingly.

2. Market trends and perspectives by major application sector

2-1. Car navigation and PND (Personal Navigation Device) sector

Until the middle of 2008, car navigation and PND sector had grown by approximately 10% ever year, but the market size (based on shipment from vendors) fell into negative year-on-year growth in 2008 owing to slow automobile sales started at around the same time of the year. The past market size of the sector was 23.3 billion yen in 2006, 26.0 billion yen in 2007 and 24.05 billion yen in 2008.

The market will continuously have hard time in also 2009, but demand for car navigations may turn up soon, because automobile manufacturers mostly adjusted inventory and are ready to increase production, and use of cards has been increasing due to the government's economic measure of offering 1,000 yen of expressway toll to ETS (Electronic Toll Collection) users.

Taking these factors into consideration, we forecast the market size of the electronic maps for this sector be 24.6 billion yen in 2009, 2.3% increase compared to the year before. Furthermore, the market size is forecasted to be 25.2 billion yen in 2010 and 26.3 billion yen in 2011 respectively due to the expected economic recovery and increase in map database price.

2-2. GIS (Geographic Information System) sector

The market size for the GIS sector (based on shipment from vendors) was 19.65 billion yen in 2006, 19.66 billion yen in 2007 and 18.91 billion yen in 2008.

The market had been gradually increasing until 2007 as the number of corporate customers, most of which are private-sector corporations, although the electronic map price was decreasing.

While the sales to government offices and municipal governments stayed relatively healthy in 2008, the sales to the private-sector, shipment of which had been growing until the mid year 2008, were weak with the deterioration of economy.

For the fiscal 2009, we forecast the market size be 17.95 billion yen as demand from private sector may not recover to the level before the economic downturn in short period of time. In 2010, however, the gradual upturn of the market should be expected with the recovery of economy, and we forecast the market reach the equivalent level to 2006 or 2007 in the year of 2011.

2-3. Map distribution and data provision to Websites/ Mobile phone sites

The market of this sector has shown slight growth over the last few years and its size was 3.96 billion yen in

2006, 4.2 billion yen in 2007 and 4.33 billion yen in 2008. The market has been staying almost flat or growing only gradually because price of the electronic maps has been decreasing while the number of websites introducing the electronic maps has been drastically increasing.

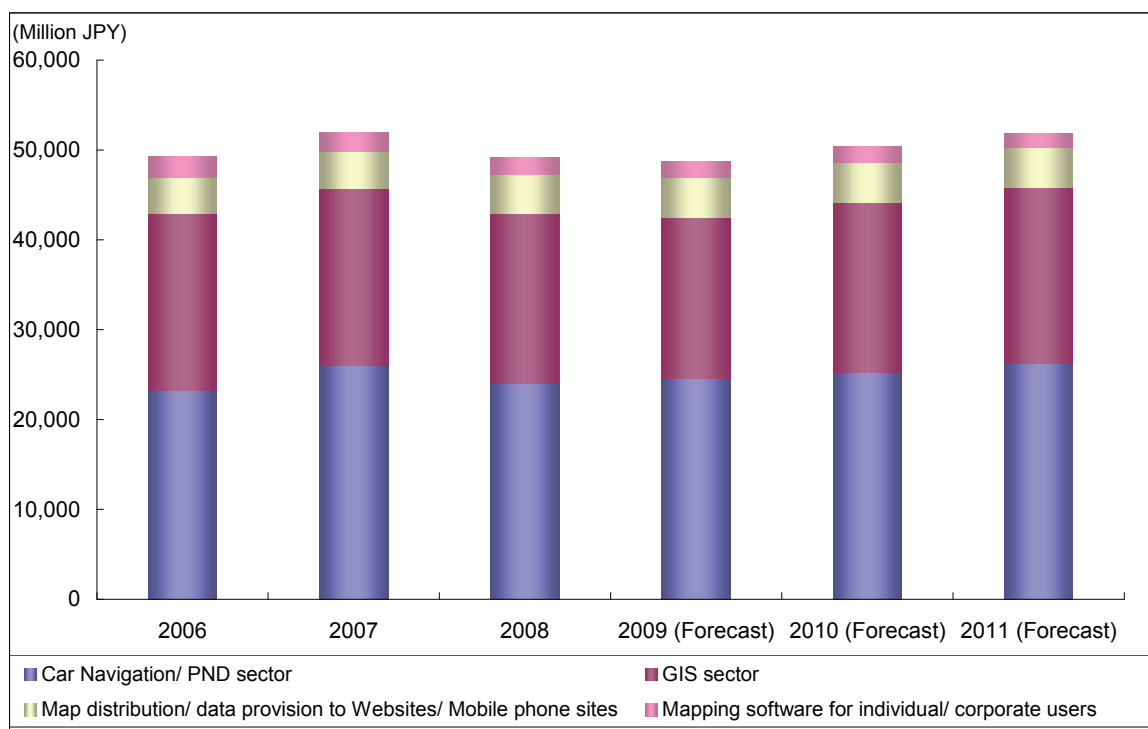
As for the mobile phone sites, on the other hand, it has played a leading role for the growth of this sector as a whole due to the large increase of the sites that have started using electronic maps with the increase of subscribers to the fixed rate packet plan.

The number of companies who utilize electronic maps on their own websites has dramatically increased due to the increased provision of API (Application Program Interface) by major internet service providers for free map information. This lead to the decrease trend in electronic map price for websites and mobile phone sites that had been provided only for value in the past, and this trend is predicted to continue in future.

Furthermore, for some sites run by major players, such as portals sites, electronic maps are provided for free and revenue from advertising run in the maps on web pages are divided among the sites and map database vendors, which is called "revenue share" that is going to be more and more popular. Such revenue from advertising will most likely be lower than that from sales of electronic map licenses or monthly revenue from ASP (Application Service Provider) services for the present, which could cause decrease in sales of map database vendors in the short run. In the future, however, we believe there should be high probability that the revenue from advertising exceeds the license sales and ASP service sales. On the other hand, there should be large number of sites, such as corporate websites, that cannot post advertisements on the maps, and expansion of this sort of free map information should be limited.

On the whole, the number of sites that introduce electronic maps should continuously increase, and consequently, we forecast that the market size will keep showing slight increase until the year of 2011.

Electronic Map Market: Transition and Future Forecast of Market Size



(Unit: Million Yen)	2006	2007	2008	2009 (Forecast)	2010 (Forecast)	2011 (Forecast)
Car Navigation/ PND sector	23,300	26,000	24,050	24,600	25,200	26,300
GIS sector	19,650	19,660	18,910	17,950	19,000	19,500
Map distribution and data provision to Websites/ Mobile phone sites	3,960	4,200	4,330	4,400	4,450	4,500
Mapping software for individual users/ corporate users	2,350	2,100	1,950	1,800	1,700	1,600
Total market size for electronic maps (Million Yen)	49,260	51,960	49,240	48,750	50,350	51,900

Notes:

1: The market size is based on shipment from vendors.

Estimated by Yano Research Institute Ltd.